

33. (New) The comparator unit of claim 29, wherein the second amplifier stage comprises a non-linear amplifier.

34. (New) The comparator unit of claim 29, wherein the second amplifier stage includes a pair of second stage output nodes and a switch connected across the pair of second stage output nodes.

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on June 27, 2002, and the references cited therewith.

Claims 1, 8, and 12 are amended, no claims are canceled, and claims 29-34 are added; as a result, claims 1-34 are now pending in this application.

Claim Objections

Claim 12 was objected to because the recitation of “the switch” lacked clear antecedent basis. Claim 12 has been amended. Applicant submit that the objection to claim 12 has been overcome.

§102 Rejection of the Claims

Claims 1-9, and 18 were rejected under 35 USC § 102(e) as being anticipated by You, et al. (U.S. Patent 6,359,473) (“You reference”). The remarks of this section notwithstanding, applicants do not admit that the You reference is prior art under 35 U.S.C. 102(e). See the section below entitled “Reservation of Rights.”

Claim 1 has been amended. Applicants respectfully submit that claims 1-9 define over the art of record and are in condition for allowance. Claim 8 has been amended to provide proper antecedent basis. This amendment has not been made for reasons of patentability.

Applicants respectfully traverse this rejection with respect to claim 18. As stated by the Federal Circuit, “[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*” *Lindemann*

Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). Applicants respectfully submit that the You reference does not disclose either a “differential signal source” or “a transmission line to couple the differential signal source to the comparator unit” as recited in claim 18. Accordingly, applicants respectfully submit that the rejection of claim 18 under 35 USC § 102(e) should be withdrawn. (b)(4)

Claim 10 was rejected under 35 USC § 102(e) as being anticipated by Nishimura, et al. (U.S. Patent 6,344,761) (“Nishimura reference”). Applicants respectfully traverse this rejection. The remarks of this section notwithstanding, applicants do not admit that the Nishimura reference is prior art under 35 U.S.C. 102(e). See the section below entitled “Reservation of Rights.”

In the paragraph following paragraph six of the office action, elements of Fig. 2 of the Nishimura reference are mapped to elements of claim 10. The pair of input nodes are identified as IN1 and IN2, and the pair of output nodes are identified as OUT and OUTB. Noticeably missing is any reference to “a differential amplifier having a pair of input nodes and a pair of output nodes” as claimed in claim 10. Applicants respectfully point out that the phrases “pair of input nodes” and “pair of output nodes” modify “differential amplifier” as recited in claim 10. (b)(4)

Applicants respectfully submit that the office action has failed to identify which portion of the Nishimura reference anticipates the “differential amplifier” of claim 10. Applicants acknowledge that the circuitry to the left of FETs Q14 and Q16 have been identified as the “first amplifier stage”; however, applicants respectfully submit that the office action has failed to identify a “differential amplifier” within the first amplifier stage that includes input nodes IN1, IN2, and output nodes OUT, OUTB. Accordingly, applicants respectfully submit that the rejection of claim 10 under 35 USC § 102(e) should be withdrawn.

§103 Rejection of the Claims

Claims 19-28 were rejected under 35 USC § 103(a) as being unpatentable over You, et al. (U.S. Patent 6,359,473). Applicants respectfully traverse this rejection. (b)(4)

With respect to claim 19, the office action states that “forming the two stages on different

dies would have been obvious.” Applicants respectfully point out that claim 19 does not claim the two stages on different dies. Rather, claim 19 claims the two stages on a single integrated circuit die. Accordingly, applicants respectfully submit that a proper *prima facie* case of obviousness has not been established with respect to claim 19, in part because the office action has failed to allege that the applied reference discloses, teaches, or suggests the subject matter of the claim.

With respect to claims 20-22, applicants respectfully submit that a proper *prima facie* case of obviousness has not been presented, in part because the office action has presented an improper motivation to modify the Nishimura reference. The office action states that “the motivation to use the You et al amplifier with other circuitry is simply to obtain the benefits taught by You et al.”

“To establish a *prima facie* case of obviousness ... there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.” MPEP 2143. Further, the suggestion or motivation to modify or combine references must “be based on objective evidence of record, ”*In re Sang Su Lee*, 61 USPQ2d 1430 (Fed. Cir. 2002).

Applicants respectfully submit that “simply to obtain the benefits [of a reference]” cannot be construed as a proper motivation to combine or modify a reference in part because it does not meet the criterion of “objective evidence” as set forth in *In re Sang Su Lee*. Further, if this reasoning were to be considered sufficient motivation to modify or combine references, then no other motivation would ever be necessary, in any context.

With respect to claims 24-28, the office action alleges that “those skilled in the art will recognize that the second stage output nodes can be either equalized concurrently with the output nodes of the first stage, or subsequent thereto, without any unexpected results or change in operation of the Fig. 9 circuit disclosed by You et al.” Applicants respectfully submit that being able to change a reference without unexpected results is not a proper motivation to modify a reference. As described in the previous two paragraphs, objective evidence of a suggestion or motivation must be provided to modify a reference in support of a proper *prima facie* case of obviousness. Simply being able to modify a reference without unexpected results is not

sufficient.

Accordingly, applicants respectfully submit that a proper *prima facie* case of obviousness has not been established with respect to claims 19-28, and that the claims are in condition for allowance.

Claim 11 was rejected under 35 USC § 103(a) as being unpatentable over Nishimura, et al. (U.S. Patent 6,344,761). Applicants respectfully traverse this rejection. As discussed above, applicants believe that claim 10 is in condition for allowance. Claim 11 depends upon claim 10, and is therefore believed to be in condition for allowance at least by virtue of dependency.

Reservation of Rights

Applicants do not admit that references cited under 35 U.S.C. §§ 102(a), 102(e), 103/102(a), or 103/102(e) are prior art, and reserve the right to swear behind them at a later date. Arguments presented to distinguish such references should not be construed as admissions that the references are prior art.

New Claims

Claims 29-34 have been added. Independent claim 29 is supported by Fig. 1A as originally filed. No new matter has been added.

Allowable Subject Matter

Claims 12-17 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants believe that claims upon which claims 12-17 depend are in condition for allowance. Accordingly, applicants also believe that claims 12-17 are in condition for allowance in their current form.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

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Title: DUAL-STAGE COMPARATOR UNIT

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Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 371-2159 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 26 day of September, 2002.

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